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The Degree of Exposure and its Association with the Influence on Attitude and Behavior

Introduction

Several studies have revealed that higher degree of exposure to mass media generates greater impact. Zajonc (1968) propose that repeated exposure "leads to a more and more positive evaluation of the stimulus." Clark and Kline (1974) introduce the concept of "message discrimination" in communication effects process. This paradigm suggests that increase in the flow of information would enhance the possibility of the repeated exposure of the individual to the media. As a result, a higher level of success is likely to be achieved. Similarly, Chaffee and Wilson (1977) claim, "individuals discriminate more messages from an 'information rich' environment than from an 'information poor' environment." They formulated that higher level of information from the media will generate greater effects on individual's cognitive, affective, and behavioral levels. McGuire (1989) relate the concept of message discrimination to exposure and found a strong relationship between the number of exposure and the levels of impact on the audience members. Finnegan, Viswanath, Hannan, Weisbrod, and Jacobs (1989) also support this view but they suggest a cut point on after some exposures because of marginal impact. Zuberi (1992) conclude that heavy viewers recalled more commercials than light viewers. Moreland and Beach (1992) assert from a series of experiments that repeated exposure affects liking. Baron, Byrne and Johnson (1998) also conclude that higher degree of exposure influences individual's liking.

However, Hyman and Sheastley (1947) suggest, "those responsible for information campaigns cannot rely simply on 'increasing the flow' to spread their information effectively." They hold that psychological barriers must be explored and overcome for the success of information campaigns. Davison, Boylan, and Yu (1982) believe that sometimes, "an intensive information campaign on a subject may not succeed in raising the level of knowledge about that subject among the people at whom the campaign is directed." Stewart and Ward (1994) even believe, "Advertising generally requires a few exposures to have any impact and a few more exposures to reach its maximum impact, and then a declining marginal impact." Devito (1997) introduces the concept of selective exposure and negates any relationship between the degree of exposure and the effects process. He suggests that listeners seek out information that are supportive to their existing beliefs and values, and avoid information contradictory to their beliefs and values.

However, the nature of communication campaigns selected for this study is totally different from the routine commercial advertising and propaganda campaigns that are commercial and seek to promote benefits of the sponsoring agencies or individuals. So, the impact at affective and behavioral levels might be different in social communication campaigns—that are noncommercial and seek to promote individual and collective benefits of the adopters—when the degree of exposure is made weaker or stronger.

Methodology

The urban and rural areas of District Dera Ismail Khan were selected for collecting responses. Four communication campaigns launched by ministries of health and population welfare through TV and radio are chosen. Since campaigns understudy are directly relevant to the health of mother and child, only married respondents were interviewed. This segment of the society is the potential decision maker for the adoption of the proposed innovations and immediately responsible for the health of its spouse and children. The study further explore whether or not the degree of exposure is differentiated on basis of selected five demographic characteristics—locality, gender, age, education, and income. Two qualified females are provided training to collect data from the female segment of the sample. Stratified method for specification of these characteristics is adopted while convenience method was used for

collection of data from the target population. Total three hundred respondents equally consisting males and females belonging to both urban and rural localities are selected. Stratified sampling procedure is adopted for classification—subgroups of demographic characteristics—of the respondents. The areas are carefully selected to ensure equal representation for Serieki, Urdu, and Pashto speaking. One hundred and fifty respondents are selected from each area. Proper city of Dera Ismail Khan, the divisional headquarter, is selected as an urban and two tehsils—Kulachi and Paharpur—of the same district were selected as rural areas. Seventy-five respondents are selected from each segment of each culture within the age range of 18 to 35 years and further divided into three response categories. The education of the people is divided into eight categories—from no education to more than masters. The monthly income is divided into four categories. The degree of exposure (time spent) is divided into three categories for both TV and radio. However, for the purpose of exposition, all response categories were collapsed into two—low and high. Questions are asked in the following fashion.

Degree of Exposure

How much time every week do you spend on watching Ptv/listening to radio Pakistan?

TV
1. upto 6 hours
2. from 6 to 12 hours
3. more than 12 hours

Radio
1. upto 6 hours
2. from 6 to 12 hours
3. more than 12 hours

Attitudinal and practice levels

These levels are measured on the basis of self-reports of the respondents. For example, do you believe that vaccine course secures children from six fatal diseases? 1. yes 2. no

Have you inoculated vaccine course to your children?
1. yes 2. no

Univariate statistics is used to analyze demographic variables, and bivariate to measure the influence on attitudinal and practice levels.

Research Questions

1. Whether or not the degree of exposure is differentiated on the basis of demographic characteristics like gender, locality, age, education, and income in social communication campaigns like: i. inoculation of vaccine course, ii. the use of iodized salt, and iii. O.R.S., and iv. the adoption of family planning[2]?
2. Whether or not the effects process on attitudinal and behavioral levels is influenced on the basis of degree of exposure in these campaigns?

Findings

More respondents belonging to selected demographic characteristics watch television for more than 6 hours per week. Income very highly while gender slightly influences the habit of watching television. Other characteristics normally affect this habit. This habit is opposite in radio. 20.3% of the overall respondents listen to radio upto 6 hours per week as compared to 15.7% who listen to radio for more than 6 hours. Income very slightly influences while other four characteristics highly influence the time consuming habit of listening to radio.

Significance- Television

Finding-1. The degree of exposure influences the effects process at both attitudinal and practice levels in the campaign about vaccine course. However, the difference is not statistically significant on the basis of degree of exposure.

TABLE 1. Weekly exposure of the respondents to TV and radio.

	Gender			Locality		Age		Education		Income	
	Overall %	male %	female %	urban %	rural %	low %	high %	low %	high %	low %	high %
TV											
Upto 6 hours	25.7	30.7	20.7	32.7	18.7	26.8	23.6	21.2	30.3	27.2	24.0
More than 6 hours	45.7	44.7	46.7	53.3	38.0	51.6	35.5	35.3	57.0	34.9	60.5
Don't watch TV	28.7	24.7	32.7	24.0	43.3	21.6	40.9	43.6	12.7	37.9	15.5
Radio											
Upto 6 hours	20.3	23.3	17.3	17.3	23.3	19.5	21.8	25.6	14.8	20.1	20.9
More than 6 hours	15.7	20.0	11.3	09.3	22.0	14.2	18.2	17.9	12.7	15.4	16.3
Don't listen to radio	64.0	56.7	71.3	73.3	54.7	66.3	60.0	56.4	72.5	64.5	62.8

Finding-2. The degree of exposure influences the effects process at both attitudinal and practice levels in the campaign about iodized salt. However, the difference is not at significant level on the basis of low/high time consuming habits.

TABLE 2
Influence on the basis of degree of exposure in the campaign about vaccine coure

		The Degree of Exposure	
		upto 6 hours	more than 6 hours
Attitudinal level	no	000.0%	04.2%
	yes	100.0%	95.8%
		n=59	n=118
chi-square		(1.270 sig.)	0.120 (not sig.)
Practice level	no	44.2%	37.8%
	yes	55.8%	62.2%
		n=77	n=135
chi-square		0.590 (sig.)	0.380 (not sig.)

Finding-3. The degree of exposure influences both attitudinal and practice levels in the campaign about O.R.S. However, the influence is not statistically significant.

TABLE 3
Influence on the basis of degree of exposure in the campaign about iodized salt.

		upto 6 hours	more than 6 hours
Attitudinal level	no	20.5%	10.5%
	yes	79.5%	89.5%
		n=44	n=95
chi-square		1.750 (sig.)	0.120 (not sig.)
Practice level	no	64.0%	66.7%
	yes	36.0%	33.3%
		n=75	n=135
chi-square		0.060 (sig.)	0.996 (not sig.)

Finding-4. The degree of exposure influences the effects process at both attitudinal and practice levels in the campaign about family planning. However, the influence is not statistically significant on the basis of variation in the degree of exposure.

		upto 6 hours	more than 6 hours
Attitudinal level	no	03.0%	01.6%
	yes	97.0%	98.4%
		n=67	n=127
chi-square		0.0200 (sig.)	0.9998 (not sig.)
Practice level	no	18.4%	15.6%
	yes	81.6%	84.4%
		n=76	n=135
chi-square		0.1200 (sig.)	0.9990 (not sig.)

TABLE 4
Influence on the basis of degree of exposure in the campaign about O.R.S.

		upto 6 hours	more than 6 hours
Attitudinal level	no	11.1%	08.9%
	yes	88.9%	91.1%
		n=54	n=112
chi-square		0.0300 (sig.)	0.9997 (not sig.)
Practice level	no	59.2%	51.9%
	yes	40.8%	48.1%
		n=76	n=135
chi-square		0.79 (sig.)	0.36 (not sig.)

TABLE 5
Influence on the basis of degree of exposure in family planning.

Significance- Radio

Finding-5. The degree of exposure influences the effects process at both attitudinal and practice levels in the campaign about vaccine course. However, difference on the basis of degree of exposure is not statistically significant.

TABLE 6
Influence on the basis of degree of exposure in the campaign about vaccine course

		The Degree of Exposure	
		upto 6 hours	more than 6 hours
Attitudinal level	no	02.2%	13.8%
	yes	97.8%	86.2%
		n=46	n=29
chi-square		2.220 (sig.)	0.136 (not sig.)
Practice level	no	51.7%	53.3%
	yes	48.3%	46.7%
		n=60	n=45
chi-square		0.000 (sig.)	1.000 (not sig.)

Finding-6. The degree of exposure affects both attitudinal and practice levels in the campaign about iodized salt. However, it is not at significant level.

TABLE 7
Influence on the basis of degree of exposure in the campaign about iodized salt.

		upto 6 hours	more than 6 hours
Attitudinal level	no	22.9%	10.0%
	yes	77.1%	90.0%
		n=35	n=20
chi-square	0.69 (sig.)		0.41 (not sig.)
Practice level	no	76.7%	69.8%
	yes	23.3%	30.2%
		n=60	n=43
chi-square		0.320 (sig.)	0.589 (not sig.)

Finding-7. Variation in the degree of exposure differentiates the effects process at both attitudinal and practice levels in O.R.S but not at statistically significant level.

		upto 6 hours	more than 6 hours
Attitudinal level	no	000.0%	000.0%
	yes	100.0%	100.0%
		n=49	n=39
Practice level	no	16.4%	21.3%
	yes	83.6%	78.7%
		n=61	n=47
chi-square		0.16 (sig.)	0.68 (not sig.)

TABLE 8
Influence on the basis of degree of exposure in the campaign about O.R.S.

Finding-8. The effects process is differentiated at both attitudinal and practice levels on the basis of degree of exposure in the campaign about family planning. However, the difference is not statistically significant.

		upto 6 hours	more than 6 hours
Attitudinal level	no	10.8%	07.4%
	yes	89.2%	92.6%
		n=37	n=27
chi-square		0.000 (sig.)	1.000 (not sig.)
Practice level	no	66.1%	59.6%
	yes	33.9%	40.4%
		n=59	n=47
chi-square		0.240 (sig.)	0.626 (not sig.)

TABLE 9
Influence on the basis of degree of exposure in the campaign about family planning.

Impact levels Media	Attitude TV	Behavior TV	Attitude Radio	Behavior Radio
Vaccine course	not sig.	not sig.	not sig.	not sig.
Iodized salt	not sig.	not sig.	not sig.	not sig.
O.R.S.	not sig.	not sig.	not sig.	not sig.
Family planning	not sig.	not sig.	not sig.	not sig.

TABLE 10
Influence on the basis of degree of exposure in the selected four campaigns.

Discussion

Table-1 shows that 45.7% of the overall respondents watch Pakistan television for more than 6 hours per week. On the other hand, only 15.7% of the overall respondents listen to radio for more than 6 hours. This trend indicates the popularity of television as a source of providing information and entertainment and decrease in the popularity of radio. Recent statistics also show that total number of radio sets in Pakistan was 1,309.8 million in 1990-91. It came down to 399.7 million in 1998-99 (Economic Survey, 2000).

This viewing and listening habits in the area understudy are significantly discriminated on the basis of income that is 34.9% and 60.5% for low and high respectively. Kamano (1999) argues that economic condition influences the attitude towards viewing. Zuberi (1992) also find differences in viewing time on the basis of socioeconomic levels in children. It means that high-income group as compared to low-income consume more time on watching television. It indicates that this group has more leisure time to watch television. The finding suggests that television is the most popular medium and the best source to provide information as compared to radio at both localities-urban and rural. In the case of radio, no significant difference in the time spent was found on the basis of income that is 15.4% and 16.3% for low and high. The findings of GALLUP (1999) too, show a very little difference on the basis of socioeconomic status that is 27% and 31% low and high.

However, the finding indicates that radio is still quite popular in the rural area and the difference is wide on urban (9.3%) and rural (22.0%) divide. GALLUP (1999) shows significant differences on the basis of locality in the same direction. Two things—(a) the nature of work, and (b) purchasing power of the family—determine this habit. Most of the population in the rural area consists of farmers; they can listen to but cannot watch while working in the fields. They are poor people and due to low purchasing power, cannot afford to buy a TV set.

The table shows that education highly influences the viewing habits and the difference is 35.3% and 57.0% low and high. It implies that high-educated people consume more time on watching television as compared to lower-educated people. The obvious logic behind this phenomenon seems that high-educated group usually belongs to the high-income group of the society and can easily afford to purchase TV set. This logic is justified on the ground that this difference does not exist in the case of radio.

Age influences viewing habit that is 51.6% and 35.5% low and high respectively in television. This wide difference happens in the case of television only. Zuberi (1992) found differences in viewing habits on the basis of age in the case of television. Similarly, Lefton (1997) claims, "Low age group spends more hours watching television." It shows that low-age group spends more time to watch television as compared to higher-age group, and television is more popular in this group. Radio listening habit is not influenced so sharply on the basis of age that is 14.2% and 18.2% low and high. However, the countrywide findings of GALLUP (1999) show that radio attracts more listeners belonging to low-age group.

Locality also influences the viewing and listening habits of the respondents but in the opposite direction. Among television viewers, there are more urban (53.3%) than rural (38.0%). On the other hand, among radio listeners, there are more rural (22.0%) than urban (9.3%). The GALLUP (1999) findings regarding listening habits about locality show that radio listeners are more rural than urban. The apparent reason behind this phenomenon seems that the ruralites cannot buy TV set due to low purchasing power. Gender does not significantly influence the viewing habit that is 44.7% and 46.7% male and female respectively while difference in radio is quite large that is 20.0% and 11.3% male and female. The GALLUP (1999) finding also shows that more male listen to radio as compared to female.

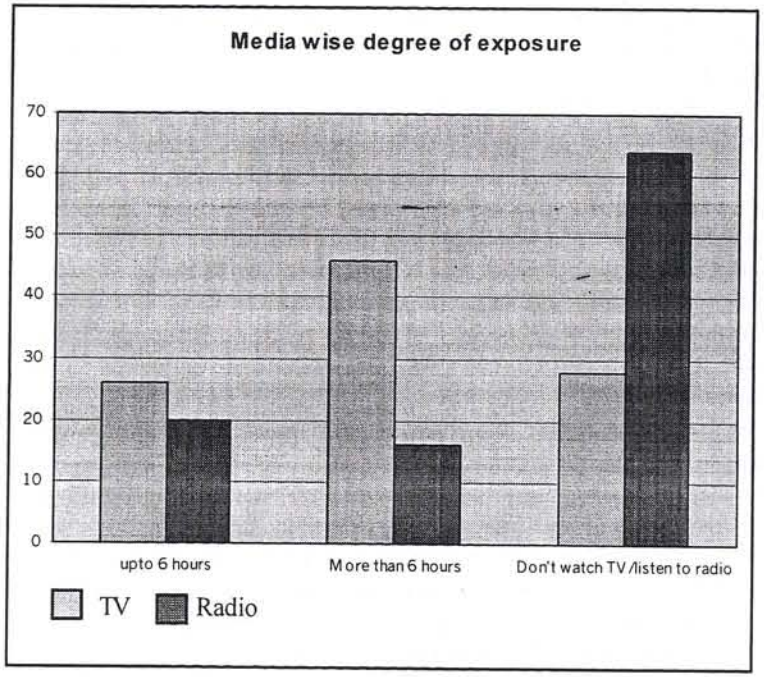
Findings 1-8 explore the relationship between the degree of exposure and the effects process at attitudinal and behavioral levels in the area of social communication campaigns. These four innovations and concepts are proposed by ministries of health and population welfare through television and radio. The findings indicate that the effects process is influenced on the basis of degree of exposure—low and high—in the selected four campaigns at both attitudinal and practice levels. However, this difference is not statistically significant at both television and radio. So, these findings partially support the view of Chaffee and Wilson (1977) claiming that higher exposure to mass media generates greater impact. But the degree of exposure influences the effects process only to some extent and the difference is not statistically significant in both media. In this way, this study partially supports the argument of "declining marginal impact" presented by Stewart and Ward (1994) arguing, "advertising generally requires a few exposures to have any impact——a few more exposures to reach its maximum impact, and then a declining marginal impact."

Conclusion and Suggestions

Keeping in view the above findings, the most important conclusion to be drawn is that there is no direct relationship between the degree of exposure to information campaign through media and effects at attitudinal and behavioral levels of the people. Perhaps, it is the need of the people, not the degree of exposure, that plays an important role in the effects process at both effects levels. This phenomenon leads to the proposition that if:

i. the message is designed in the language that is understandable to the audience members;
ii. priority is given to their needs and requirements of the people;
iii. individual rather than collective benefits are stressed; and
iv. the existing structural and socio-religious, and psychological barriers are explored and overcome, it is more likely that a higher level of success may be achieved by a communication campaign.

FIGURE 1
Degree of exposure



Notes

1 Commercial advertising and political campaigns seek to promote benefits of the sponsoring agencies or individuals while social communication campaigns are noncommercial and seek to promote individual and collective benefits of the adopters.

2 The first campaign advocates the inoculation of vaccine course to mother and child against six fatal diseases in the newly born babies. The second campaign proposes the use of iodized salt against throat diseases, physical and mental weaknesses. The third campaign suggests the use of oral rehyderation salt (O.R.S.) during vomiting and diarrhea. The fourth campaign promotes the idea of small family norm.

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